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EXAMINER

BURCH, MELODY M

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**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Application Number: 10/016,472
Filing Date: December 10, 2001
Appellant(s): GRZESIAK ET AL.

Philip R. Warn
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 5/6/04.

(1) *Real Party in Interest*

A statement identifying the real party in interest is contained in the brief.

(2) *Related Appeals and Interferences*

A statement identifying the related appeals and interferences which will directly affect or be directly affected by or have a bearing on the decision in the pending appeal is contained in the brief.

(3) *Status of Claims*

The statement of the status of the claims contained in the brief is correct.

(4) *Status of Amendments After Final*

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) *Summary of Invention*

The summary of invention contained in the brief is correct.

(6) *Issues*

The appellant's statement of the issues in the brief is correct.

(7) *Grouping of Claims*

Appellant's brief includes a statement that the claims do not stand or fall together and provides reasons as set forth in 37 CFR 1.192(c)(7) and (c)(8).

(8) *Claims Appealed*

The copy of the appealed claims contained in the Appendix to the brief is correct.

(9) *Prior Art of Record*

Art Unit: 3683

| | | |
|-----------|---------------|--------|
| JP | 11264460 | 9-1999 |
| 6,102,825 | Hisano et al. | 8-2000 |
| 5,003,842 | Hatta et al. | 4-1991 |
| 4,070,981 | Guinn et al. | 1-1978 |

(10) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claim 1, 7, and 8 are rejected under 35 U.S.C. 102(b) as being anticipated by US Patent 5752588 to Reichert et al.

Re: claims 1 and 7. Reichert et al. show in figure 1 a brake band mechanism for an automatic transmission having a brake drum disclosed in col. 3 line 6, the mechanism comprising: a brake band 14 encircling the brake drum, the brake band including opposing ends the brake band operable to be compressed and expanded around the brake drum, a hydraulic servo shown within element 1, and a linkage 10,11,12 coupled to the servo and the brake band, the servo activating the linkage to provide positive compression and expansion to the band for applying friction to the brake drum to control its speed of rotation.

Reichert et al. show the limitation of the hydraulic servo being a two-stage servo including a first piston 9 and a second piston 3, the first piston being smaller than the second

Art Unit: 3683

piston, the first piston being operable to provide rapid movement of the brake band and the second piston being operable to provide fine adjustments of the brake band.

Re: claim 8. Reichert et al. show the limitation of the mechanism further including a clip structure shown in the area of element number 13, the clip structure being mounted to an end of the brake band and being coupled to the linkage via the abutment with element 12 of the linkage.

3. Claim 1, 7, and 8 are rejected under 35 U.S.C. 102(b) as being anticipated by JP-11264460 (using US Patent 6102825 to Hisano et al. as an English equivalent).

Re: claims 1 and 7. Hisano et al. show in figure 1 a brake band mechanism for an automatic transmission having a brake drum 31, the mechanism comprising: a brake band 32 encircling the brake drum, the brake band including opposing ends the brake band operable to be compressed and expanded around the brake drum, a hydraulic servo 4, and a linkage 42,34 coupled to the servo and the brake band, the servo activating the linkage to provide positive compression and expansion to the band for applying friction to the brake drum to control its speed of rotation.

Hisano et al. show the limitation of the hydraulic servo being a two-stage servo including a first piston 43 and a second piston 44, the first piston being smaller than the second piston, the first piston being operable to provide rapid movement of the brake band and the second piston being operable to provide fine adjustments of the brake band.

Re: claim 8. Hisano et al. show the limitation of the mechanism further including a clip structure 33,35, the clip structure being mounted to an end of the brake band and being coupled to the linkage.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 4, 5, 9, 11, 13, 18-21, and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Reichert et al. in view of US Patent 5003842 to Hatta et al. Reichert et al. show in figure 1 a brake band mechanism for an automatic transmission having a brake drum disclosed in col. 3 line 6, the mechanism comprising: a brake band 14 encircling the brake drum, the brake band including opposing ends, the brake band operable to be compressed and expanded around the brake drum, a two-stage hydraulic servo, the two stage servo providing a rapid activation of the linkage during a first stage to rapidly expand the brake band using first piston 9, and a controlled compression and expansion of the brake band during a second stage using second piston 3, and a linkage 11,12 coupled to the servo and the brake band, and a clip structure shown in the area of element 13, the clip structure being mounted to an end of the brake band and being coupled to the linkage by way of the abutment with element 12 of linkage 11,12, the servo activating the linkage to provide positive compression and expansion to the band for applying friction to the brake drum to control its speed of rotation; but does not include the limitation of a servo rod position sensor for determining the position of a stroke rod of the servo. Hatta et al. teach in figure 5 and in col. 10 lines 29-30 the use of a stroke rod position detecting means in a brake band mechanism. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the servo of Reichert et al. to have included

Art Unit: 3683

a servo rod position sensor, as taught by Hatta et al., in order to provide a means of detecting the position of the rod of the servo to help determine band compression or expansion.

6. Claims 4, 5, and 13-15, 18-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP-11264460 to Hisano et al. in view of US Patent 5003842 to Hatta et al.

Re: claims 4, 5, 13, 18, 19, 21, and 23. Hisano et al. show in figure 1 a brake band mechanism for an automatic transmission having a brake drum 31, the mechanism comprising: a brake band 32 encircling the brake drum, the brake band including opposing ends, the brake band operable to be compressed and expanded around the brake drum, a two-stage hydraulic servo, the two stage servo providing a rapid activation of the linkage during a first stage to rapidly expand the brake band using first piston 43, and a controlled compression and expansion of the brake band during a second stage using second piston 44, and a linkage 34,42 coupled to the servo and the brake band, and a clip structure 33,35, the clip structure being mounted to an end of the brake band and being coupled to the linkage, the servo activating the linkage to provide positive compression and expansion to the band for applying friction to the brake drum to control its speed of rotation, but does not include the limitation of a servo rod position sensor for determining the position of a stroke rod of the servo. Hatta et al. teach in figure 5 and in col. 10 lines 29-30 the use of a stroke rod position detecting means in a brake band mechanism. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the servo of Hisano et al. to have included a servo rod position sensor, as taught by Hatta et al., in order to provide a means of detecting the position of the rod of the servo to help determine band compression or expansion.

Art Unit: 3683

Re: claims 14 and 20. Hisano et al. disclose in col. 7 lines 22-30 the limitation of shift parameters being based on band strain, seat acceleration, shaft torque or a combination of these or particularly shaft torque (from the turbine rotation speed sensor).

Re: claims 15 and 22. Hisano et al. show in figure 1 the use of shift control accomplished by way of control of an apply solenoid 55.

7. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Reichert et al. in view of US Patent 4070981 to Guinn et al. Guinn et al. teach in figure 3 the use of a strain sensor 28 associated with a band brake 30. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the brake band mechanism of Reichert et al. to have included a strain sensor, as taught by Guinn et al., in order to provide a means of detecting the compression and expansion of the band brake device.

8. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over JP-11264460 in view of US Patent 4070981 to Guinn et al. Guinn et al. teach in figure 3 the use of a strain sensor 28 associated with a band brake 30. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the brake band mechanism of Hisano et al. to have included a strain sensor, as taught by Guinn et al., in order to provide a means of detecting the compression and expansion of the band brake device.

Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Reichert et al. in view of US Patent 5003842 to Hatta et al. as applied to claim 9 above, and further in view of Guinn et al. Guinn et al. teach in figure 3 the use of a strain sensor 28 associated with a band brake 30. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the brake band mechanism of Reichert et al. to have included a strain sensor, as

Art Unit: 3683

taught by Guinn et al., as modified, in order to provide a means of detecting the compression and expansion of the band brake device.

(11) Response to Argument

Applicant argues that Reichert et al. fail to disclose the following limitation "servo provides a rapid activation of [the] linkage during a first stage to rapidly expand [the] brake band, and a controlled compression and expansion of [the] brake band during a second stage".

Applicant admits on pg. 7 of the application specification that the servo providing the rapid activation of the linkage during the first stage to rapidly expand the brake band occurs by way of an apply piston 62 and that the controlled compression and expansion of the brake band during a second stage occurs by way of a larger apply piston 64.

Examiner notes that Reichert et al. show in figure 1 a two-stage hydraulic servo shown within element 1 including a small apply piston 9 and a larger apply piston 3. Examiner notes that the small apply piston 9 of Reichert et al. results in a rapid activation and that the larger apply piston 3 results in a controlled compression and expansion of the brake band to the same extent that Applicant's small apply piston 62 results in rapid activation and Applicant's larger apply piston 64 results in the controlled compression and expansion of the brake band. Examiner further notes that it is old and well-known that an element having a smaller surface area will be activated more rapidly than an element having a larger surface area. Examiner also emphasizes that in col. 3 lines 2-16 Reichert et al. describe that activation of small piston 9 (specifically see col. 3 lines 2-5) occurs before activation of larger piston 3 (specifically see col. 3 lines 15-16).

Art Unit: 3683

Applicant further argues that the Reichert et al. reference describes that one of the objects of its invention is to minimize the volume of hydraulic fluid required to apply a friction brake. Applicant states that such an object suggests that the first stage of the hydraulic servo is accomplished slowly. Examiner is unsure of how Applicant arrived at the stated conclusion since the presence of a minimized volume of fluid would suggest that brake activation would occur faster since it takes less time to accumulate and distribute a smaller volume of fluid.

The same argument applies to the Hisano et al. reference. Hisano et al. show in figure 1 a two stage hydraulic servo having a small apply piston 43 and a larger apply piston 44. Examiner reiterates that the small apply piston 43 of Hisano et al. results in a rapid activation and that the larger apply piston 44 results in a controlled compression and expansion of the brake band to the same extent that Applicant's small apply piston 62 results in rapid activation and Applicant's larger apply piston 64 results in the controlled compression and expansion of the brake band.

With regard to the Guinn et al. reference, Applicant argues that one of ordinary skill in the art would not look to Guinn et al. for guidance on constructing or operating an automatic transmission. In response to applicant's argument that Guinn et al. is nonanalogous art, it has been held that a prior art reference must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the applicant was concerned, in order to be relied upon as a basis for rejection of the claimed invention. See *In re Oetiker*, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992). In this case, the Guinn et al. reference is reasonably pertinent to the

Art Unit: 3683

particular problem with which the Applicant is concerned since Guinn et al. attempts to detect the compression and tension of a brake band 30 using a strain sensor 28. (See col. 4 lines 66-68 of Guinn et al.)

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

mmb 1/9/05
mmb
January 9, 2005

Conferees
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rs

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